WHAT IS CLAIMED IS:

15

20

25

30

1. A guide wire comprising:

a wire member including a welded portion formed by welding a first wire disposed on the distal side of said wire member to a second wire disposed on the proximal side from said first wire and made from a material having an elastic modulus larger than that of said first wire, said welded portion being made substantially smooth; and

a cover layer provided on the outer periphery of said 10 wire member covering at least said welded portion between said first wire and said second wire.

2. A guide wire comprising:

a wire member including a welded portion formed by welding a first wire disposed on the distal side of said wire member to a second wire disposed on the proximal side from said first wire and made from a material having an elastic modulus larger than that of said first wire; and

a cover layer provided on the outer periphery of said wire member covering at least said welded portion between said first wire and said second wire;

wherein said welded portion has a projection projecting in the outer peripheral direction.

3. A guide wire comprising:

a wire member including a welded portion formed by welding a first wire disposed on the distal side of said wire member to a second wire disposed on the proximal side from said first wire and made from a material having an elastic modulus larger than that of said first wire; and

a cover layer provided on the outer periphery of said wire member covering at least said welded portion between said first wire and said second wire; and

a distal-side cover layer disposed on the distal side

from said cover layer, said distal-side cover layer being made from a material different from that of said cover layer.

- 4. A guide wire according to claim 3, wherein said cover layer is formed in such a manner that said wire member is substantially not heated at the time of covering said wire member with said cover layer, and said distal-side cover layer is formed in such a manner that said wire member is heated at the time of covering said wire member with said distal-side cover layer.
- 5. A guide wire comprising:

a wire member including a welded portion formed by welding a first wire disposed on the distal side of said wire member to a second wire disposed on the proximal side from said first wire and made from a material having an elastic modulus larger than that of said first wire; and

a cover layer provided on the outer periphery of said wire member covering at least said welded portion between said first wire and said second wire; and

- a proximal-side cover layer disposed on the proximal side from said cover layer, said proximal-side cover layer being made from a material different from that of said cover layer.
- 6. A guide wire according to claim 5, wherein said cover layer is formed in such a manner that said wire member is substantially not heated at the time of covering said wire member with said cover layer, and said proximal-side cover layer is formed in such a manner that said wire member is heated at the time of covering said wire member with said proximal-side cover layer.

5

15

20

25